



Lendl Ah-Fook
CS Mining
PO Box 608
Milford, UT 84251

RECEIVED

JUL 20 2016

DIV. OF OIL, GAS & MINING

RE: ITDF

Dear Lendl Ah-Fook:

Lab Set ID: 1606554

3440 South 700 West
Salt Lake City, UT 84119

American West Analytical Laboratories received sample(s) on 6/24/2016 for the analyses presented in the following report.

American West Analytical Laboratories (AWAL) is accredited by The National Environmental Laboratory Accreditation Program (NELAP) in Utah and Texas; and is state accredited in Colorado, Idaho, New Mexico, Wyoming, and Missouri.

All analyses were performed in accordance to the NELAP protocols unless noted otherwise. Accreditation scope documents are available upon request. If you have any questions or concerns regarding this report please feel free to call.

The abbreviation "Surr" found in organic reports indicates a surrogate compound that is intentionally added by the laboratory to determine sample injection, extraction, and/or purging efficiency. The "Reporting Limit" found on the report is equivalent to the practical quantitation limit (PQL). This is the minimum concentration that can be reported by the method referenced and the sample matrix. The reporting limit must not be confused with any regulatory limit. Analytical results are reported to three significant figures for quality control and calculation purposes.

Thank You,

Approved by:

Kyle F. Gross
Digitally signed
by Kyle F. Gross
Date:
2016.07.11
06:39:11 -06'00'

Laboratory Director or designee

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer



INORGANIC ANALYTICAL REPORT

Client: CS Mining
Project: ITDF
Lab Sample ID: 1606554-001
Client Sample ID: ITDF
Collection Date: 6/24/2016 1216h
Received Date: 6/24/2016 1701h

Contact: Lendl Ah-Fook

Analytical Results

TOTAL METALS

3440 South 700 West
 Salt Lake City, UT 84119

Phone: (801) 263-8686
 Toll Free: (888) 263-8686
 Fax: (801) 263-8687
 e-mail: awal@awal-labs.com

web: www.awal-labs.com

Kyle F. Gross
 Laboratory Director

Jose Rocha
 QA Officer

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Antimony	mg/L	6/27/2016 1226h	6/30/2016 1519h	SW6020A	0.0100	0.0411	
Arsenic	mg/L	6/27/2016 1226h	6/30/2016 1519h	SW6020A	0.0100	5.34	
Barium	mg/L	6/27/2016 1226h	6/28/2016 1428h	SW6020A	0.00200	0.0858	
Beryllium	mg/L	6/27/2016 1226h	7/1/2016 1622h	SW6020A	0.0500	< 0.0500	*
Cadmium	mg/L	6/27/2016 1226h	6/30/2016 1519h	SW6020A	0.00250	0.404	
Calcium	mg/L	6/27/2016 1226h	6/28/2016 800h	SW6010C	100	540	
Chromium	mg/L	6/27/2016 1226h	6/28/2016 1428h	SW6020A	0.00200	0.664	
Copper	mg/L	6/27/2016 1226h	6/30/2016 1423h	SW6020A	1.00	337	
Lead	mg/L	6/27/2016 1226h	6/28/2016 1428h	SW6020A	0.00200	0.691	
Magnesium	mg/L	6/27/2016 1226h	6/28/2016 800h	SW6010C	100	1,850	
Mercury	mg/L	7/5/2016 1409h	7/6/2016 851h	SW7470A	0.000150	< 0.000150	
Potassium	mg/L	6/27/2016 1226h	6/28/2016 820h	SW6010C	10.0	66.3	
Selenium	mg/L	6/27/2016 1226h	6/30/2016 1519h	SW6020A	0.0100	0.0236	
Silver	mg/L	6/27/2016 1226h	6/30/2016 1519h	SW6020A	0.0100	< 0.0100	*
Sodium	mg/L	6/27/2016 1226h	6/28/2016 820h	SW6010C	10.0	272	
Thallium	mg/L	6/27/2016 1226h	6/28/2016 1428h	SW6020A	0.00200	0.00845	
Zinc	mg/L	6/27/2016 1226h	6/30/2016 1423h	SW6020A	2.50	37.9	

* - The reporting limits were raised due to sample matrix interferences.



INORGANIC ANALYTICAL REPORT

Client: CS Mining
Project: ITDF
Lab Sample ID: 1606554-001
Client Sample ID: ITDF
Collection Date: 6/24/2016 1216h
Received Date: 6/24/2016 1701h

Contact: Lendl Ah-Fook

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Alkalinity (as CaCO ₃)	mg/L		6/27/2016 530h	SM2320B	10.0	< 10.0	^
Bicarbonate (as CaCO ₃)	mg/L		6/27/2016 530h	SM2320B	10.0	< 10.0	
Carbon Dioxide	mg/L		6/27/2016 1603h	SM4500-CO ₂ -D	5.00	< 5.00	
Carbonate (as CaCO ₃)	mg/L		6/27/2016 530h	SM2320B	10.0	< 10.0	
Chloride	mg/L		7/6/2016 1313h	E300.0	10.0	331	
Hydroxide (as CaCO ₃)	mg/L		6/27/2016 530h	SM2320B	10.0	< 10.0	
Nitrate (as N)	mg/L		6/24/2016 1839h	E353.2	0.100	2.88	
Nitrite (as N)	mg/L		6/24/2016 1839h	E353.2	0.100	0.140	
pH @ 25° C	pH Units		6/24/2016 1732h	SM4500-H+B	1.00	1.65	
Sulfate	mg/L		7/6/2016 1330h	E300.0	750	14,600	
Total Dissolved Solids	mg/L		6/27/2016 1300h	SM2540C	100	21,300	

^ - Insufficient sample volume to perform MS/MSD analysis. An LCSD was added to provide precision data.

3440 South 700 West
Salt Lake City, UT 84119

Phone: (801) 263-8686
Toll Free: (888) 263-8686
Fax: (801) 263-8687
e-mail: awal@awal-labs.com
web: www.awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer



3440 South 700 West

Salt Lake City, UT 84119

Phone: (801) 263-8686, Toll Free: (888) 263-8686, Fax: (801) 263-8687

e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: CS Mining
Lab Set ID: 1606554
Project: ITDF

Contact: Lendl Ah-Fook
Dept: ME
QC Type: LCS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: LCS-43726	Date Analyzed: 06/28/2016 758h												
Test Code: 6010C-W	Date Prepared: 06/27/2016 1226h												
Calcium	9.82	mg/L	SW6010C	0.00643	1.00	10.00	0	98.2	80 - 120				
Magnesium	10.2	mg/L	SW6010C	0.0457	1.00	10.00	0	102	80 - 120				
Potassium	9.50	mg/L	SW6010C	0.106	1.00	10.00	0	95.0	80 - 120				
Sodium	9.82	mg/L	SW6010C	0.0142	1.00	10.00	0	98.2	80 - 120				
Lab Sample ID: LCS-43726	Date Analyzed: 06/28/2016 1304h												
Test Code: 6020-W	Date Prepared: 06/27/2016 1226h												
Antimony	0.197	mg/L	SW6020A	0.000854	0.00200	0.2000	0	98.5	85 - 115				
Arsenic	0.191	mg/L	SW6020A	0.000706	0.00200	0.2000	0	95.6	85 - 115				
Barium	0.193	mg/L	SW6020A	0.000788	0.00200	0.2000	0	96.4	85 - 115				
Beryllium	0.203	mg/L	SW6020A	0.000960	0.00200	0.2000	0	102	85 - 115				
Cadmium	0.194	mg/L	SW6020A	0.0000364	0.000500	0.2000	0	96.9	85 - 115				
Chromium	0.204	mg/L	SW6020A	0.000650	0.00200	0.2000	0	102	85 - 115				
Copper	0.199	mg/L	SW6020A	0.000386	0.00200	0.2000	0	99.3	85 - 115				
Lead	0.198	mg/L	SW6020A	0.000818	0.00200	0.2000	0	98.8	85 - 115				
Selenium	0.194	mg/L	SW6020A	0.000612	0.00200	0.2000	0	96.9	85 - 115				
Silver	0.192	mg/L	SW6020A	0.0000738	0.00200	0.2000	0	96.0	85 - 115				
Thallium	0.197	mg/L	SW6020A	0.00110	0.00200	0.2000	0	98.3	85 - 115				
Lab Sample ID: LCS-43726	Date Analyzed: 06/29/2016 1028h												
Test Code: 6020-W	Date Prepared: 06/27/2016 1226h												
Zinc	0.968	mg/L	SW6020A	0.00424	0.00500	1.000	0	96.8	85 - 115				
Lab Sample ID: LCS-43834	Date Analyzed: 07/06/2016 824h												
Test Code: HG-W-7470A	Date Prepared: 07/05/2016 1409h												
Mercury	0.00358	mg/L	SW7470A	0.00000559	0.000150	0.003330	0	107	80 - 120				

Report Date: 7/9/2016 Page 4 of 17

All analyses applicable to the CWA, SDWA, and RCRA are performed in accordance to NELAC protocols. Pertinent sampling information is located on the attached COC. Confidential Business Information: This report is provided for the exclusive use of the addressee. Privileges of subsequent use of the name of this company or any member of its staff, or reproduction of this report in connection with the advertisement, promotion or sale of any product or process, or in connection with the re-publication of this report for any purpose other than for the addressee will be granted only on contact. This company accepts no responsibility except for the due performance of inspection and/or analysis in good faith and according to the rules of the trade and of science.



3440 South 700 West

Salt Lake City, UT 84119

Phone: (801) 263-8686, Toll Free: (888) 263-8686, Fax: (801) 263-8687

e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer

QC SUMMARY REPORT

Client: CS Mining

Lab Set ID: 1606554

Project: ITDF

Contact: Lendl Ah-Fook

Dept: ME

QC Type: MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: MB-43726	Date Analyzed:	06/28/2016	756h										
Test Code:	6010C-W	Date Prepared:	06/27/2016	1226h									
Calcium	< 1.00	mg/L	SW6010C	0.00643	1.00								
Magnesium	< 1.00	mg/L	SW6010C	0.0457	1.00								
Potassium	< 1.00	mg/L	SW6010C	0.106	1.00								
Sodium	< 1.00	mg/L	SW6010C	0.0142	1.00								
Lab Sample ID: MB-43726	Date Analyzed:	06/28/2016	1300h										
Test Code:	6020-W	Date Prepared:	06/27/2016	1226h									
Antimony	< 0.00200	mg/L	SW6020A	0.000854	0.00200								
Arsenic	< 0.00200	mg/L	SW6020A	0.000706	0.00200								
Barium	< 0.00200	mg/L	SW6020A	0.000788	0.00200								
Beryllium	< 0.00200	mg/L	SW6020A	0.000960	0.00200								
Cadmium	< 0.000500	mg/L	SW6020A	0.0000364	0.000500								
Chromium	< 0.00200	mg/L	SW6020A	0.000650	0.00200								
Copper	< 0.00200	mg/L	SW6020A	0.000386	0.00200								
Lead	< 0.00200	mg/L	SW6020A	0.000818	0.00200								
Selenium	< 0.00200	mg/L	SW6020A	0.000612	0.00200								
Silver	< 0.00200	mg/L	SW6020A	0.0000738	0.00200								
Thallium	< 0.00200	mg/L	SW6020A	0.00110	0.00200								
Lab Sample ID: MB-43726	Date Analyzed:	06/29/2016	1024h										
Test Code:	6020-W	Date Prepared:	06/27/2016	1226h									
Zinc	< 0.00500	mg/L	SW6020A	0.00424	0.00500								
Lab Sample ID: MB-43834	Date Analyzed:	07/06/2016	822h										
Test Code:	HG-W-7470A	Date Prepared:	07/05/2016	1409h									
Mercury	< 0.000150	mg/L	SW7470A	0.00000559	0.000150								

Report Date: 7/9/2016 Page 5 of 17

All analyses applicable to the CWA, SDWA, and RCRA are performed in accordance to NELAC protocols. Pertinent sampling information is located on the attached COC. Confidential Business Information: This report is provided for the exclusive use of the addressee. Privileges of subsequent use of the name of this company or any member of its staff, or reproduction of this report in connection with the advertisement, promotion or sale of any product or process, or in connection with the re-publication of this report for any purpose other than for the addressee will be granted only on contact. This company accepts no responsibility except for the due performance of inspection and/or analysis in good faith and according to the rules of the trade and of science.



3440 South 700 West

Salt Lake City, UT 84119

Phone: (801) 263-8686, Toll Free: (888) 263-8686, Fax: (801) 263-8687

e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: CS Mining

Lab Set ID: 1606554

Project: ITDF

Contact: Lendl Ah-Fook

Dept: ME

QC Type: MS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1606557-001AMS													
Date Analyzed:		06/28/2016 808h											
Test Code:		6010C-W											
Date Prepared:		06/27/2016 1226h											
Calcium	96.1	mg/L	SW6010C	0.0643	10.0	100.0	0.0715	96.0	75 - 125				
Magnesium	100	mg/L	SW6010C	0.457	10.0	100.0	0	100	75 - 125				
Potassium	94.9	mg/L	SW6010C	1.06	10.0	100.0	0.31	94.6	75 - 125				
Sodium	102	mg/L	SW6010C	0.142	10.0	100.0	3.44	98.4	75 - 125				
Lab Sample ID: 1606365-001AMS													
Date Analyzed:		06/28/2016 1316h											
Test Code:		6020-W											
Date Prepared:		06/27/2016 1226h											
Antimony	0.202	mg/L	SW6020A	0.000854	0.00200	0.2000	0.00396	99.0	75 - 125				
Arsenic	0.205	mg/L	SW6020A	0.000706	0.00200	0.2000	0.00375	100	75 - 125				
Barium	0.394	mg/L	SW6020A	0.000788	0.00200	0.2000	0.204	95.1	75 - 125				
Beryllium	0.197	mg/L	SW6020A	0.000960	0.00200	0.2000	0	98.6	75 - 125				
Cadmium	0.193	mg/L	SW6020A	0.0000364	0.000500	0.2000	0.000692	96.4	75 - 125				
Chromium	0.370	mg/L	SW6020A	0.000650	0.00200	0.2000	0.176	97.0	75 - 125				
Lead	0.211	mg/L	SW6020A	0.000818	0.00200	0.2000	0.0227	94.1	75 - 125				
Selenium	0.198	mg/L	SW6020A	0.000612	0.00200	0.2000	0.00376	96.9	75 - 125				
Silver	0.187	mg/L	SW6020A	0.0000738	0.00200	0.2000	0.000229	93.5	75 - 125				
Thallium	0.180	mg/L	SW6020A	0.00110	0.00200	0.2000	0	89.9	75 - 125				
Lab Sample ID: 1606545-002DMS													
Date Analyzed:		06/28/2016 1326h											
Test Code:		6020-W											
Date Prepared:		06/27/2016 1226h											
Antimony	0.198	mg/L	SW6020A	0.000854	0.00200	0.2000	0.00293	97.6	75 - 125				
Arsenic	0.207	mg/L	SW6020A	0.000706	0.00200	0.2000	0.00357	102	75 - 125				
Barium	0.345	mg/L	SW6020A	0.000788	0.00200	0.2000	0.158	93.4	75 - 125				
Beryllium	0.194	mg/L	SW6020A	0.000960	0.00200	0.2000	0	96.9	75 - 125				
Cadmium	0.191	mg/L	SW6020A	0.0000364	0.000500	0.2000	0.000516	95.2	75 - 125				
Chromium	0.335	mg/L	SW6020A	0.000650	0.00200	0.2000	0.139	98.0	75 - 125				
Lead	0.197	mg/L	SW6020A	0.000818	0.00200	0.2000	0.0124	92.2	75 - 125				
Selenium	0.190	mg/L	SW6020A	0.000612	0.00200	0.2000	0.00309	93.6	75 - 125				

Report Date: 7/9/2016 Page 6 of 17

All analyses applicable to the CWA, SDWA, and RCRA are performed in accordance to NELAC protocols. Pertinent sampling information is located on the attached COC. Confidential Business Information: This report is provided for the exclusive use of the addressee. Privileges of subsequent use of the name of this company or any member of its staff, or reproduction of this report in connection with the advertisement, promotion or sale of any product or process, or in connection with the re-publication of this report for any purpose other than for the addressee will be granted only on contact. This company accepts no responsibility except for the due performance of inspection and/or analysis in good faith and according to the rules of the trade and of science.



3440 South 700 West

Salt Lake City, UT 84119

Phone: (801) 263-8686, Toll Free: (888) 263-8686, Fax: (801) 263-8687

e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: CS Mining
Lab Set ID: 1606554
Project: ITDF

Contact: Lendl Ah-Fook
Dept: ME
QC Type: MS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1606545-002DMS													
Test Code: 6020-W		Date Analyzed: 06/28/2016 1326h											
		Date Prepared: 06/27/2016 1226h											
Silver	0.183	mg/L	SW6020A	0.0000738	0.00200	0.2000	0.000222	91.2	75 - 125				
Thallium	0.171	mg/L	SW6020A	0.00110	0.00200	0.2000	0	85.4	75 - 125				
Lab Sample ID: 1606365-001AMS													
Test Code: 6020-W		Date Analyzed: 06/29/2016 1034h											
		Date Prepared: 06/27/2016 1226h											
Zinc	54.9	mg/L	SW6020A	0.212	0.250	1.000	56.3	-148	75 - 125				2
Lab Sample ID: 1606545-002DMS													
Test Code: 6020-W		Date Analyzed: 06/29/2016 1043h											
		Date Prepared: 06/27/2016 1226h											
Zinc	64.4	mg/L	SW6020A	0.212	0.250	1.000	68.7	-425	75 - 125				2
Lab Sample ID: 1606545-002DMS													
Test Code: 6020-W		Date Analyzed: 06/29/2016 1053h											
		Date Prepared: 06/27/2016 1226h											
Copper	10.4	mg/L	SW6020A	0.00386	0.0200	0.2000	9.58	394	75 - 125				2
Lab Sample ID: 1606365-001AMS													
Test Code: 6020-W		Date Analyzed: 06/29/2016 1111h											
		Date Prepared: 06/27/2016 1226h											
Copper	5.28	mg/L	SW6020A	0.00193	0.0100	0.2000	5.03	122	75 - 125				
Lab Sample ID: 1606365-001AMS													
Test Code: HG-W-7470A		Date Analyzed: 07/06/2016 831h											
		Date Prepared: 07/05/2016 1409h											
Mercury	0.00616	mg/L	SW7470A	0.00000559	0.000150	0.003330	0.00266	105	80 - 120				
Lab Sample ID: 1606527-001FMS													
Test Code: HG-W-7470A		Date Analyzed: 07/06/2016 840h											
		Date Prepared: 07/05/2016 1409h											
Mercury	0.00341	mg/L	SW7470A	0.00000559	0.000150	0.003330	0	102	80 - 120				

Report Date: 7/9/2016 Page 7 of 17

All analyses applicable to the CWA, SDWA, and RCRA are performed in accordance to NELAC protocols. Pertinent sampling information is located on the attached COC. Confidential Business Information: This report is provided for the exclusive use of the addressee. Privileges of subsequent use of the name of this company or any member of its staff, or reproduction of this report in connection with the advertisement, promotion or sale of any product or process, or in connection with the re-publication of this report for any purpose other than for the addressee will be granted only on contact. This company accepts no responsibility except for the due performance of inspection and/or analysis in good faith and according to the rules of the trade and of science.



Client: CS Mining
Lab Set ID: 1606554
Project: ITDF

3440 South 700 West
Salt Lake City, UT 84119

Phone: (801) 263-8686, Toll Free: (888) 263-8686, Fax: (801) 263-8687
e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Contact: Lendl Ah-Fook
Dept: ME
QC Type: MS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1606566-001JMS	Date Analyzed:	07/06/2016	854h										
Test Code: HG-W-7470A	Date Prepared:	07/05/2016	1409h										
Mercury	0.00342	mg/L	SW7470A	0.00000559	0.000150	0.003330	0	103	80 - 120				
Lab Sample ID: 1606620-001DMS	Date Analyzed:	07/06/2016	909h										
Test Code: HG-W-7470A	Date Prepared:	07/05/2016	1409h										
Mercury	0.00359	mg/L	SW7470A	0.00000559	0.000150	0.003330	0	108	80 - 120				
Lab Sample ID: 1606645-001FMS	Date Analyzed:	07/06/2016	918h										
Test Code: HG-W-7470A	Date Prepared:	07/05/2016	1409h										
Mercury	0.00348	mg/L	SW7470A	0.00000559	0.000150	0.003330	0	104	80 - 120				

² - Analyte concentration is too high for accurate matrix spike recovery and/or RPD.

Insufficient sample volume/mass was provided to allow for a full volume/mass analysis of the MS/MSD. Reduced sample volume for the MS/MSD was used as a result.



3440 South 700 West

Salt Lake City, UT 84119

Phone: (801) 263-8686, Toll Free: (888) 263-8686, Fax: (801) 263-8687

e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: CS Mining
Lab Set ID: 1606554
Project: ITDF

Contact: Lendl Ah-Fook
Dept: ME
QC Type: MSD

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1606557-001AMSD													
Test Code: 6010C-W	Date Analyzed: 06/28/2016 810h	Date Prepared: 06/27/2016 1226h											
Calcium	97.1	mg/L	SW6010C	0.0643	10.0	100.0	0.0715	97.0	75 - 125	96.1	1.02	20	
Magnesium	102	mg/L	SW6010C	0.457	10.0	100.0	0	102	75 - 125	100	1.44	20	
Potassium	96.1	mg/L	SW6010C	1.06	10.0	100.0	0.31	95.8	75 - 125	94.9	1.25	20	
Sodium	103	mg/L	SW6010C	0.142	10.0	100.0	3.44	99.6	75 - 125	102	1.14	20	
Lab Sample ID: 1606365-001AMSD													
Test Code: 6020-W	Date Analyzed: 06/28/2016 1319h	Date Prepared: 06/27/2016 1226h											
Antimony	0.198	mg/L	SW6020A	0.000854	0.00200	0.2000	0.00396	96.9	75 - 125	0.202	2.12	20	
Arsenic	0.198	mg/L	SW6020A	0.000706	0.00200	0.2000	0.00375	97.1	75 - 125	0.205	3.28	20	
Barium	0.386	mg/L	SW6020A	0.000788	0.00200	0.2000	0.204	91.1	75 - 125	0.394	2.05	20	
Beryllium	0.193	mg/L	SW6020A	0.000960	0.00200	0.2000	0	96.5	75 - 125	0.197	2.13	20	
Cadmium	0.189	mg/L	SW6020A	0.0000364	0.000500	0.2000	0.000692	94.2	75 - 125	0.193	2.32	20	
Chromium	0.363	mg/L	SW6020A	0.000650	0.00200	0.2000	0.176	93.9	75 - 125	0.37	1.73	20	
Lead	0.206	mg/L	SW6020A	0.000818	0.00200	0.2000	0.0227	91.6	75 - 125	0.211	2.41	20	
Selenium	0.197	mg/L	SW6020A	0.000612	0.00200	0.2000	0.00376	96.7	75 - 125	0.198	0.207	20	
Silver	0.182	mg/L	SW6020A	0.0000738	0.00200	0.2000	0.000229	91.1	75 - 125	0.187	2.63	20	
Thallium	0.176	mg/L	SW6020A	0.00110	0.00200	0.2000	0	88.2	75 - 125	0.18	1.87	20	
Lab Sample ID: 1606545-002DMSD													
Test Code: 6020-W	Date Analyzed: 06/28/2016 1329h	Date Prepared: 06/27/2016 1226h											
Antimony	0.200	mg/L	SW6020A	0.000854	0.00200	0.2000	0.00293	98.6	75 - 125	0.198	1.03	20	
Arsenic	0.205	mg/L	SW6020A	0.000706	0.00200	0.2000	0.00357	101	75 - 125	0.207	0.903	20	
Barium	0.348	mg/L	SW6020A	0.000788	0.00200	0.2000	0.158	95.1	75 - 125	0.345	0.986	20	
Beryllium	0.195	mg/L	SW6020A	0.000960	0.00200	0.2000	0	97.3	75 - 125	0.194	0.380	20	
Cadmium	0.193	mg/L	SW6020A	0.0000364	0.000500	0.2000	0.000516	96.0	75 - 125	0.191	0.885	20	
Chromium	0.333	mg/L	SW6020A	0.000650	0.00200	0.2000	0.139	97.2	75 - 125	0.335	0.440	20	
Lead	0.199	mg/L	SW6020A	0.000818	0.00200	0.2000	0.0124	93.3	75 - 125	0.197	1.05	20	
Selenium	0.191	mg/L	SW6020A	0.000612	0.00200	0.2000	0.00309	93.9	75 - 125	0.19	0.248	20	

Report Date: 7/9/2016 Page 9 of 17

All analyses applicable to the CWA, SDWA, and RCRA are performed in accordance to NELAC protocols. Pertinent sampling information is located on the attached COC. Confidential Business Information: This report is provided for the exclusive use of the addressee. Privileges of subsequent use of the name of this company or any member of its staff, or reproduction of this report in connection with the advertisement, promotion or sale of any product or process, or in connection with the re-publication of this report for any purpose other than for the addressee will be granted only on contact. This company accepts no responsibility except for the due performance of inspection and/or analysis in good faith and according to the rules of the trade and of science.

name of this company or any member of its staff, or reproduction of this report in connection with the advertisement, promotion or sale of any product or process, or in connection with the re-publication of this report for any purpose other than for the addressee will be granted only on contact. This company accepts no responsibility except for the due performance of inspection and/or analysis in good faith and according to the rules of the trade and of science.



Client: CS Mining
Lab Set ID: 1606554
Project: ITDF

3440 South 700 West
Salt Lake City, UT 84119

Phone: (801) 263-8686, Toll Free: (888) 263-8686, Fax: (801) 263-8687
e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Contact: Lendl Ah-Fook
Dept: ME
QC Type: MSD

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1606566-001JMSD		Date Analyzed:	07/06/2016 900h										
Test Code: HG-W-7470A		Date Prepared:	07/05/2016 1409h										
Mercury	0.00332	mg/L	SW7470A	0.00000559	0.000150	0.003330	0	99.7	80 - 120	0.00343	3.06	20	
Lab Sample ID: 1606620-001DMSD		Date Analyzed:	07/06/2016 910h										
Test Code: HG-W-7470A		Date Prepared:	07/05/2016 1409h										
Mercury	0.00354	mg/L	SW7470A	0.00000559	0.000150	0.003330	0	106	80 - 120	0.00359	1.31	20	
Lab Sample ID: 1606645-001FMSD		Date Analyzed:	07/06/2016 920h										
Test Code: HG-W-7470A		Date Prepared:	07/05/2016 1409h										
Mercury	0.00345	mg/L	SW7470A	0.00000559	0.000150	0.003330	0	104	80 - 120	0.00348	0.722	20	

² - Analyte concentration is too high for accurate matrix spike recovery and/or RPD.

Insufficient sample volume/mass was provided to allow for a full volume/mass analysis of the MS/MSD. Reduced sample volume for the MS/MSD was used as a result.



Client: CS Mining
Lab Set ID: 1606554
Project: ITDF

3440 South 700 West
Salt Lake City, UT 84119

Phone: (801) 263-8686, Toll Free: (888) 263-8686, Fax: (801) 263-8687
e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Contact: Lendl Ah-Fook
Dept: WC
QC Type: DUP

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1606554-001ADUP		Date Analyzed: 06/24/2016 1732h											
Test Code: PH-4500H+B													
pH @ 25° C	1.63	pH Units	SM4500-H+B	1.00	1.00					1.65	1.22	5	
Lab Sample ID: 1606551-001CDUP		Date Analyzed: 06/27/2016 1300h											
Test Code: TDS-W-2540C													
Total Dissolved Solids	1,660	mg/L	SM2540C	17.5	20.0					1640	1.22	5	



3440 South 700 West

Salt Lake City, UT 84119

Phone: (801) 263-8686, Toll Free: (888) 263-8686, Fax: (801) 263-8687

e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: CS Mining

Lab Set ID: 1606554

Project: ITDF

Contact: Lendl Ah-Fook

Dept: WC

QC Type: LCS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: LCS-R91727		Date Analyzed: 07/06/2016 1127h											
Test Code: 300.0-W													
Chloride	5.06	mg/L	E300.0	0.00516	0.100	5.000	0	101	90 - 110				
Sulfate	5.17	mg/L	E300.0	0.0201	0.750	5.000	0	103	90 - 110				
Lab Sample ID: LCS-R91415		Date Analyzed: 06/27/2016 530h											
Test Code: ALK-W-2320B													
Alkalinity (as CaCO ₃)	50,100	mg/L	SM2320B	1.38	10.0	50,000	0	100	90 - 110				
Lab Sample ID: LCS-R91409		Date Analyzed: 06/24/2016 1818h											
Test Code: NO2-W-353.2													
Nitrite (as N)	0.994	mg/L	E353.2	0.00152	0.0100	1.000	0	99.4	90 - 110				
Lab Sample ID: LCS-R91408		Date Analyzed: 06/24/2016 1819h											
Test Code: NO3-W-353.2													
Nitrate (as N)	0.964	mg/L	E353.2	0.00725	0.0100	1.000	0	96.4	90 - 110				
Lab Sample ID: LCS-R91407		Date Analyzed: 06/24/2016 1732h											
Test Code: PH-4500H+B													
pH @ 25° C	9.00	pH Units	SM4500-H+B	1.00	1.00	9.000	0	100	98 - 102				
Lab Sample ID: LCS-R91485		Date Analyzed: 06/27/2016 1300h											
Test Code: TDS-W-2540C													
Total Dissolved Solids	190	mg/L	SM2540C	8.77	10.0	205.0	0	92.7	80 - 120				



Client: CS Mining
Lab Set ID: 1606554
Project: ITDF

3440 South 700 West

Salt Lake City, UT 84119

Phone: (801) 263-8686, Toll Free: (888) 263-8686, Fax: (801) 263-8687

e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Contact: Lendl Ah-Fook

Dept: WC

QC Type: LCSD

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: LCSD-R91415		Date Analyzed: 06/27/2016 530h											
Test Code: ALK-W-2320B													
Alkalinity (as CaCO ₃)	50,100	mg/L	SM2320B	1.38	10.0	50,000	0	100	90 - 110	50100	0	20	



3440 South 700 West

Salt Lake City, UT 84119

Phone: (801) 263-8686, Toll Free: (888) 263-8686, Fax: (801) 263-8687

e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer

QC SUMMARY REPORT

Client: CS Mining

Lab Set ID: 1606554

Project: ITDF

Contact: Lendl Ah-Fook

Dept: WC

QC Type: MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: MB-R91727 Date Analyzed: 07/06/2016 1111h													
Test Code: 300.0-W													
Chloride	< 0.100	mg/L	E300.0	0.00516	0.100								
Sulfate	< 0.750	mg/L	E300.0	0.0201	0.750								
Lab Sample ID: MB-R91415 Date Analyzed: 06/27/2016 530h													
Test Code: ALK-W-2320B													
Alkalinity (as CaCO ₃)	< 10.0	mg/L	SM2320B	1.38	10.0								
Bicarbonate (as CaCO ₃)	< 10.0	mg/L	SM2320B	1.38	10.0								
Carbonate (as CaCO ₃)	< 10.0	mg/L	SM2320B	1.38	10.0								
Hydroxide (as CaCO ₃)	< 10.0	mg/L	SM2320B	1.38	10.0								
Lab Sample ID: MB-R91409 Date Analyzed: 06/24/2016 1816h													
Test Code: NO2-W-353.2													
Nitrite (as N)	< 0.0100	mg/L	E353.2	0.00152	0.0100								
Lab Sample ID: MB-R91408 Date Analyzed: 06/24/2016 1816h													
Test Code: NO3-W-353.2													
Nitrate (as N)	< 0.0100	mg/L	E353.2	0.00725	0.0100								
Lab Sample ID: MB-R91485 Date Analyzed: 06/27/2016 1300h													
Test Code: TDS-W-2540C													
Total Dissolved Solids	< 10.0	mg/L	SM2540C	8.77	10.0								



3440 South 700 West

Salt Lake City, UT 84119

Phone: (801) 263-8686, Toll Free: (888) 263-8686, Fax: (801) 263-8687

e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: CS Mining

Lab Set ID: 1606554

Project: ITDF

Contact: Lendl Ah-Fook

Dept: WC

QC Type: MS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1606566-002DMS Date Analyzed: 07/06/2016 1218h													
Test Code: 300.0-W													
Chloride	223	mg/L	E300.0	0.103	2.00	100.0	116	107	90 - 110				
Sulfate	148	mg/L	E300.0	0.402	15.0	100.0	43.4	104	90 - 110				
Lab Sample ID: 1606645-001DMS Date Analyzed: 07/06/2016 1544h													
Test Code: 300.0-W													
Chloride	126	mg/L	E300.0	0.103	2.00	100.0	20.4	105	90 - 110				
Sulfate	122	mg/L	E300.0	0.402	15.0	100.0	17.8	104	90 - 110				
Lab Sample ID: 1606504-009DMS NO2 Date Analyzed: 06/24/2016 1821h													
Test Code: NO2-W-353.2													
Nitrite (as N)	10.1	mg/L	E353.2	0.0152	0.100	10.00	0.0365	101	90 - 110				
Lab Sample ID: 1606554-001AMS NO2 Date Analyzed: 06/24/2016 1840h													
Test Code: NO2-W-353.2													
Nitrite (as N)	9.95	mg/L	E353.2	0.0152	0.100	10.00	0.14	98.1	90 - 110				
Lab Sample ID: 1606504-009DMS NO3 Date Analyzed: 06/24/2016 1837h													
Test Code: NO3-W-353.2													
Nitrate (as N)	10.5	mg/L	E353.2	0.0725	0.100	10.00	0.887	95.6	90 - 110				
Lab Sample ID: 1606554-001AMS NO3 Date Analyzed: 06/24/2016 1843h													
Test Code: NO3-W-353.2													
Nitrate (as N)	12.0	mg/L	E353.2	0.0725	0.100	10.00	2.88	91.0	90 - 110				

Report Date: 7/9/2016 Page 16 of 17

All analyses applicable to the CWA, SDWA, and RCRA are performed in accordance to NELAC protocols. Pertinent sampling information is located on the attached COC. Confidential Business Information: This report is provided for the exclusive use of the addressee. Privileges of subsequent use of the name of this company or any member of its staff, or reproduction of this report in connection with the advertisement, promotion or sale of any product or process, or in connection with the re-publication of this report for any purpose other than for the addressee will be granted only on contact. This company accepts no responsibility except for the due performance of inspection and/or analysis in good faith and according to the rules of the trade and of science.



3440 South 700 West

Salt Lake City, UT 84119

Phone: (801) 263-8686, Toll Free: (888) 263-8686, Fax: (801) 263-8687

e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer

QC SUMMARY REPORT

Client: CS Mining

Lab Set ID: 1606554

Project: ITDF

Contact: Lendl Ah-Fook

Dept: WC

QC Type: MSD

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1606566-002DMSD Date Analyzed: 07/06/2016 1235h													
Test Code: 300.0-W													
Chloride	221	mg/L	E300.0	0.103	2.00	100.0	116	105	90 - 110	223	0.741	20	
Sulfate	146	mg/L	E300.0	0.402	15.0	100.0	43.4	103	90 - 110	148	0.939	20	
Lab Sample ID: 1606645-001DMSD Date Analyzed: 07/06/2016 1601h													
Test Code: 300.0-W													
Chloride	125	mg/L	E300.0	0.103	2.00	100.0	20.4	104	90 - 110	126	0.686	20	
Sulfate	122	mg/L	E300.0	0.402	15.0	100.0	17.8	104	90 - 110	122	0.423	20	
Lab Sample ID: 1606504-009DMSD NO2 Date Analyzed: 06/24/2016 1836h													
Test Code: NO2-W-353.2													
Nitrite (as N)	9.99	mg/L	E353.2	0.0152	0.100	10.00	0.0365	99.5	90 - 110	10.1	1.33	10	
Lab Sample ID: 1606554-001AMSD NO2 Date Analyzed: 06/24/2016 1842h													
Test Code: NO2-W-353.2													
Nitrite (as N)	9.97	mg/L	E353.2	0.0152	0.100	10.00	0.14	98.3	90 - 110	9.95	0.201	10	
Lab Sample ID: 1606504-009DMSD NO3 Date Analyzed: 06/24/2016 1838h													
Test Code: NO3-W-353.2													
Nitrate (as N)	10.5	mg/L	E353.2	0.0725	0.100	10.00	0.887	95.7	90 - 110	10.5	0.0999	10	
Lab Sample ID: 1606554-001AMSD NO3 Date Analyzed: 06/24/2016 1844h													
Test Code: NO3-W-353.2													
Nitrate (as N)	12.0	mg/L	E353.2	0.0725	0.100	10.00	2.88	91.0	90 - 110	12	0.00919	10	

Report Date: 7/9/2016 Page 17 of 17

All analyses applicable to the CWA, SDWA, and RCRA are performed in accordance to NELAC protocols. Pertinent sampling information is located on the attached COC. Confidential Business Information: This report is provided for the exclusive use of the addressee. Privileges of subsequent use of the name of this company or any member of its staff, or reproduction of this report in connection with the advertisement, promotion or sale of any product or process, or in connection with the re-publication of this report for any purpose other than for the addressee will be granted only on contact. This company accepts no responsibility except for the due performance of inspection and/or analysis in good faith and according to the rules of the trade and of science.

Printed: 6/24/2016

FOR LABORATORY USE ONLY [fill out on page 1]:

%M ☒

RT ☒

CN ☒

TAT ☒

QC ☒

HOK _____

HOK _____

HOK _____

COC Emailed _____



American West
Analytical Laboratories
3440 S. 700 W. Salt Lake City, UT 84119
Phone # (801) 283-8686 Toll Free # (888) 283-8686
Fax # (801) 283-8687 Email awal@awal-labs.com
www.awal-labs.com

CHAIN OF CUSTODY

All analysis will be conducted using NELAP accredited methods and all data will be reported using AWAL's standard analytical tests and reporting limits (PQL) unless specifically requested otherwise on this Chain of Custody and/or attached documentation.

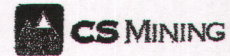
16006554

AWAL Lab Sample Set #
Page of

Client: CS MINING LLC
Address: 1200 SOUTH 200 WEST
MILFORD, UT 84751
Contact: LENDL AHFROCK
Phone #: _____ Cell #: _____
Email: lahfrock@csmining.com
Project Name: ITDF
Project #: _____
PO #: _____
Sampler Name: LENDL AHFROCK

QC Level:		Turn Around Time:		Unless other arrangements have been made, signed reports will be emailed by 5:00 pm on the day they are due.		Due Date:									
1	2	3	3+	1	2	3	4	5	6	7	8	9	10	11	12
1		2		3		3+		1		2		3		4	
Sample Matrix		See attached													
Report down to the MDL		Include EDD:		Lab Filter for:		Field Filtered For:		For Compliance With:		Known Hazards & Sample Comments		Laboratory Use Only		Samples Were:	
<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
NELAP		RCRA		CWA		SDWA		ELAP / A2LA		MLAP		Non-Compliance		Other:	
1		2		3		4		5		6		7		8	
Shipped & hand delivered		Ambient or Chilled		Temperature		Received Broken/Leaking (Improperly Sealed)		Received With Missing Times		Checked at bench		COC Tape Was:		Discrepancies Between Sample Labels and COC Records	
Y		N		Y		N		Y		N		Y		N	
1		2		3		4		5		6		7		8	
Present on Outer Packaging		Unbroken on Outer Packaging		Present on Sample		Unbroken on Sample		Discrepancies Between Sample Labels and COC Records							
Y		N		Y		N		Y		N		Y		N	
1		2		3		4		5		6		7		8	
Relinquished by:		Date:		Received by:		Date:		Special Instructions:							
Signature: <u>LENDL AHFROCK</u>		6/24		Signature: <u>Robert J. Bayer</u>		6/24		Acid Base							
Print Name: <u>LENDL AHFROCK</u>		Time: <u>1:19</u>		Print Name: <u>Robert J. Bayer</u>		Time: <u>1:19</u>		Low PH							
Relinquished by:		Date:		Received by:		Date:									
Signature: <u>Robert J. Bayer</u>		6/24		Signature: <u>Denise Brun</u>		6/24									
Print Name: <u>Robert J. Bayer</u>		Time: <u>5:01</u>		Print Name: <u>Denise Brun</u>		Time: <u>6:10</u>									
Relinquished by:		Date:		Received by:		Date:									
Signature: _____		_____		Signature: _____		_____									
Print Name: _____		_____		Print Name: _____		_____									
Relinquished by:		Date:		Received by:		Date:									
Signature: _____		_____		Signature: _____		_____									
Print Name: _____		_____		Print Name: _____		_____									

CAUTION VY LOW pH
H₂SO₄ Solution



Testing Parameters for Water Analysis

Alkalinity (HCO_3 , CO_3 , CO_2 , OH) ~~Sulfate~~

Calcium

Chloride

Magnesium

Nitrite

Nitrate

Potassium

Sodium

Sulfate

Trace Metals

Antimony

Arsenic

Barium

Beryllium

Cadmium

Chromium

Copper

Lead

Mercury

Selenium

Silver

Thallium

Zinc

Misc.

pH

Total Dissolved Solids

~~Gross Alpha~~

~~226 & 238~~

Please contact ~~Tyler Erickson~~ or ~~Todd Memmott~~ at 435.387.5053. ext. 5205 or via email
~~terickson@csmining.com~~ / ~~tmemmott@csmining.com~~ if you have any questions, thank you.